

A Clinico-Epidemiological Study on Alopecia Areata in North Andhra Pradesh of IndiaBTVN Raju¹, K Venkata Chalam², Dhanyasi Edukondalarao³, D Sailaja⁴¹Assistant Professor, Department of DVL, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India²Associate Professor, Department of DVL, Government Medical College, Srikakulam, Andhra Pradesh, India³Associate Professor, Department of DVL, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India.⁴Assistant Professor, Department of General Medicine, Government Medical College, Srikakulam, Andhra Pradesh

Received: 25-02-2024 / Revised: 23-03-2024 / Accepted: 26-04-2024

Corresponding Author: Dr. BTVN Raju

Conflict of interest: Nil

Abstract:**Background:** Alopecia areata is a common chronic inflammatory disease directed against the anagen hair follicle, causing nonscarring alopecia of the scalp, beard and/or body hair. The sex incidence is probably equal. Nowadays Alopecia areata is one of the most common hair disorder in patients attending to dermatology clinics. There is a limited number of studies regarding Clinico-epidemiological features of Alopecia areata, that's why we are doing this study for awareness of upcoming dermatologists.**Aims:** Our present study was aimed to describe clinical and epidemiological features of Alopecia areata in patients attended to dermatology department of King George Hospital, affiliated to Andhra Medical College, Visakhapatnam, Andhra Pradesh, India.**Materials and Methods:** In our study, total Hundred patients of Alopecia areata attended to our DVL OPD of KGH, Visakhapatnam were included to evaluate clinical, epidemiological data and excluded patients with other causes of hair loss.**Results:** In our study, majority of the patients belong to age group of 5-35 yrs (80%). Men (60%) were affected higher when compared with women (40%). In most of the patients duration was more than 3 months (70%). Recurrences observed less (40%). Recurrences observed mainly in younger patients and housewives. In clinical examination, patchy type presented as multiple patches (90%) and clinically in majority of the patients smooth bald hair loss patches were observed on scalp (80%). Severity of the disease was assessed by SALT Score, majority in S1 group (<25% hair loss).**Conclusion:** According to our study, in North Andhra Pradesh, Alopecia areata is most commonly seen in younger age group. Recurrences are less common in patients with no other comorbidities and also after treatment with steroids.**Keywords:** Alopecia, Scalp, Patchy, SALT Score.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

Alopecia areata is a common chronic inflammatory disease directed against the anagen hair follicle, causing nonscarring alopecia of the scalp, beard and/or body hair [1,2]. Alopecia areata is a chronic organ specific autoimmune disease, mediated by autoreactive T cells which affects hair follicles and sometimes the nails [4]. This hair disorder, was 1st described by Cornelius Celsus. This is one of the most common hair loss disorder in young and middle aged Indian women and less common in men. It's usually presents as smooth bald patch. Scalp is commonly involved. Under Dermoscopic

examination, codability sign, black dot, yellow dot, and tapered hair were observed. Alopecia areata has psychological impact on quality of life. Pathogenesis is not clear, Positive family history was seen in 10-20% of cases but based on histopathology lymphocytic infiltration around the follicles in the affected skin supports the autoimmune theory [5]. It affects all races. Clinically it is classified into various patterns (Patchy, Ophiasis, Salsaphio, Reticulate, Diffuse, subtotal, Alopecia totalis and Alopecia universalis [5]) and based on clinical examination and

SALT(Severity of Alopecia Tool Score) system[S0- No Hair loss, S1-<25% Hair loss to S5-100% Hair loss] [6].

Our study was aimed to evaluate, aetiological, epidemiological, clinical and dermoscopic patterns and causes of recurrences in Alopecia areata.

Materials and Methods

Our study was a prospective study, to assess the epidemiological and clinical patterns of Alopecia Areata. Total Hundred (100) Alopecia areata cases seen in our DVL OPD of KGH affiliated to Andhra Medical College, Visakhapatnam were enrolled and assessed. We excluded other hair loss disorders by clinical and dermoscopic examination. We recorded the demographic data as age, sex, occupation, address, drug history, triggering factors(other comorbidities especially autoimmune diseases), recurrences after treatment, clinical patterns and Dermoscopic examination to demonstrate various signs seen in Alopecia areata and SALT Scoring System to assess the severity of hair loss . Complete dermatological examination was done to know any other dermatological disorders along with Alopecia areata.

Statistical Analysis: Ratios and percentages were used.

Results

In our study total 100(patients) clinically diagnosed Alopecia areata cases were assessed. Out of hundred patients, 80 patients were between 5-35 yrs age group(80%) and the remaining 20 patients were above 35 years(20%). Males were more affected when compared with females. Out of Hundred patients, 60 patients were males, 40 patients were females. Most of the female patients were house wives and belong to reproductive age

group. In males most of the patients were students. In both males and females recurrences were observed 6 months to 1 year after treatment with various systemic and topical modalities especially in patients with other comorbidities and low socioeconomic status. Most of the patients responded to topical modalities. Under Dermoscopic examination, in most of the patients coudability sign, Exclamatory mark hair, black dot, yellow dot and tapered hair were observed. on clinical examination we assessed the severity of the hair loss based on SALT Score and most of the patients came under S1 category with less than 25% hair loss. Most of the patients were presented with patchy type pattern and more than 1 cm in size (80%). Number of hair loss patches were more than one in majority of the patients(80%). In 60% of the patients with alopecia areata on scalp , vertex was involved. We observed hair loss patches diagnosed as alopecia areata in few number at beard, eye lashes and mustche. We treated most of the cases with topical steroids, and some patients with chronic recalcitrant hair loss patches treated with, topical Tofacitinib, topical contact sensitizers, Minoxidil along with PRP, NBUVB And PUVA therapy. Recurrences were observed in patients after 6 months to 1 year after treatment in some patients with comorbidities especially Hypothyroidism. Out of hundred patients, 80% of the patients(number 80) had more than 3 months-1 yr duration, 10% patients had less than 3 months duration (number 10)and 10% patients(number 10) had more than 1 year duration. Clinically patchy pattern with scalp involvement was observed in 80% of patients(number 80). In 20% of the cases occiput of the scalp, beard, mustache and eye lashes were involved.



Figure 1: Alopecia areata Patchypattern with multiple smooth bald patches on scalp



Figure 2: Alopecia areata with Ophiasis pattern on occipital area of scalp



Figure 3: Alopecia areata with patchy pattern of hair loss at beard

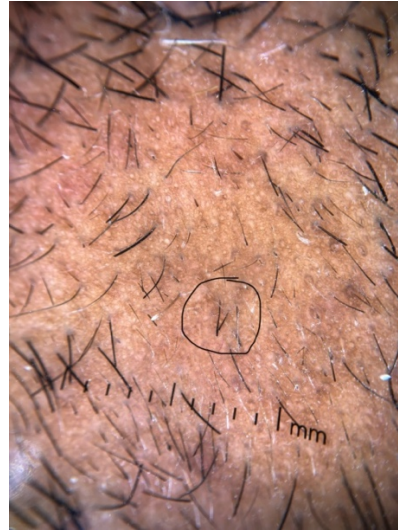


Figure 4: Dermoscopic examination showing Exclamation mark hair



Figure 5: Dermoscopic examination- Caudability sign

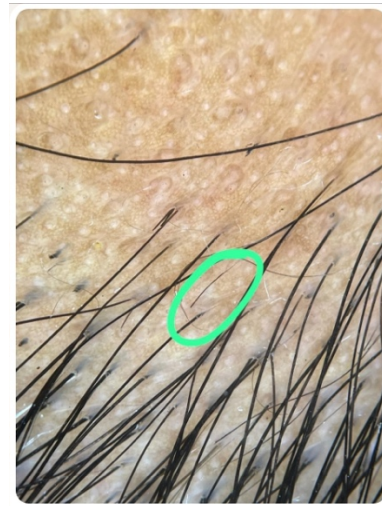


Figure 6: Dermoscopic examination- showing tapered hair

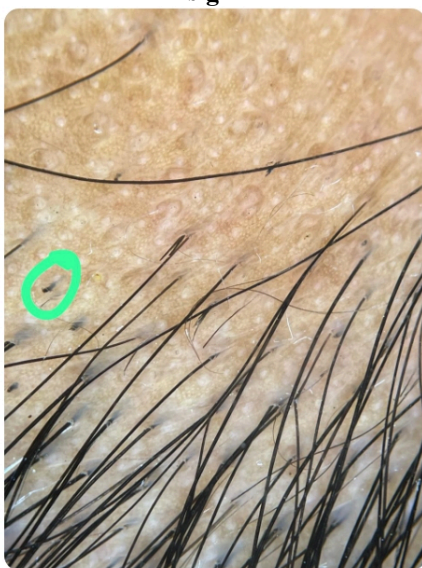


Figure 7: Dermoscopic examination shows- Black dot



Figure 8: Patchy pattern -Single patch on vertex of scalp

Discussion

Alopecia areata is one of the most common hair loss disorders and it has most cosmetic importance and psychological impact on quality of life, especially in females and young individuals. Most of the women are getting this hair loss disorder in reproductive age group. Young individuals are most commonly affected. In few patients family history of alopecia areata was noticed. In our study total 100 Alopecia areata cases were included to assess the clinico-epidemiological patterns. We have done this study to create more awareness to public and upcoming dermatologists why because, at present people are giving more importance to hair loss disorders because of cosmetic importance and psychological impact and also because of availability of various hair loss treatments. In our study. The mean age group commonly involved was 25yrs and male to female ratio was 1.5:1, the age group affected and sex ratio results were comparable with Yogesh Detal. Study [7] and Aysha et. al. study [8]. Regarding clinical patterns patchy type with multiple in number were observed in 80% of patients, the results were comparable with Aysha A et al study [8]. In clinicial examination and assessment with SALT score most of the patients had <25% hair loss and vertex of the scalp commonly involved, in few cases Ophiasis pattern in occipital area and beard, eyelashes were involved. Under Dermoscopic examination Caudability sign, exclamation mark hair, black dot, yellow dot and tapered hair were observed and the findings were consistent with diagnosis of alopecia areata.

SALT score was used to assess the severity and to choose the treatment modality and to assess the response to treatment clinically. Patients with other comorbidities (Atopic dermatitis, Hypothyroidism, Vitiligo and diabetes) had recurrences and had poor response to treatment. Patients with short duration responded to Intralesional steroids and chronic recalcitrant cases responded well to Topical contact sensitizers, NB-UVB, PUVA and Topical Minoxidill, Tofacitinib.

Conclusion

According to our study, in North Andhra Pradesh, Alopecia areata is most commonly seen in young adults age group, with slight male preponderance.

Recurrences are more common in patients with other comorbidities and ophiasis pattern. Patchy type with scalp involvement is common. Patients with Other associated autoimmune diseases have poor prognosis. Irregular, irrelevant medication and comorbidities, chronicity are the common reasons for recurrence.

References

1. Singh G, Lavanya MS. Topical immunotherapy in alopecia areata. *Int J Trichol.* 2010;2:36-39.
2. Seetharam KA. Alopecia areata: an update. *Indian J Dermatol Venereol Leprol.* 2013; 79: 563-575.
3. A.G. Messenger, D.A.R. de Berker, A.G Messenger and R.D. Sinclair. Disorders of hair. In: Tony Burns, Stephen Breathnach, Neil Cox and Christopher Griffiths, editors. *Rook's textbook of dermatology.* 7th ed. Blackwell Science: Oxford 2004; Vol:4:63.36-63.46.
4. Ralf Paus, Elise A. Olsen, Andrew. Messenger. Disorders of the skin appendages, disorders of the hair and nails, hair growth disorders. In: Klaus Wolff, Lowell A. Goldsmith, Stephen I.Katz, Barbara A. Gilchrist, Amy S. Paller, David J. L. effell, editors. *Fitzpatrick dermatology in general medicine.* 7th ed. Mc Graw Hill: Newyork 2008; Vol:1:739-777.
5. Gurmohan Singh, Sanjay Singh, Gurpreet Singh, Vineet Kaur. Systemic therapy. In: R.G. Valia, K. Siddappa, editors. *IADVL Text book of Dermatology.* 3rd ed. Bhalani publishing house: Mumbai 2008; Vol:II:1619-1632.
6. Olsen et al. Alopecia areata investigational assessment guide lines-Part-II. *J Am Acad Dermatol* 2004;51:440-7.
7. Yogesh D., Bijayanti D, Bachaspatimayum R, Clinicoepidemiological profile, precipitating factors and severity indicators in alopecia areata in Manipur. *IP Indian J Clin Exp Dermatol.* 2018;4(4):335-341.
8. Aysha A. Alshahrani, Rawan Al-Tuwaijri, Zainah A. Abuoliat, Mesnad Alyabsi, Mohammed I. AlJasser, Rayan Alkhodair, "Prevalence and Clinical Characteristics of Alopecia Areata at a Tertiary Care Center in Saudi Arabia", *Dermatology Research and Practice*, 2020;(4): 2020.